

From the Rev. J. E. Tenison-Woods, F.G.S., etc.: On some Australian Tertiary Corals; Paleontological evidence of Australian Tertiary Formation; Tertiary Deposits of Australia; Some new Australian Polyzoa; Census—with brief descriptions of Marine Shells, etc.

From J. Brazier, Esq.: List of Land Shells—Fitzroy Island.

From J. W. Taylor, Esq. (the Editor), per Mr. J. Brazier: English Quarterly Journal of Conchology.

PAPERS READ.

Note on a species of *Therapon* found in a dam near Warialda.

By WILLIAM MACLEAY, F.L.S.

A few days ago I received from W. R. Campbell, Esq., of Trigamon Station, near Warialda, three specimens of a Percoid Fish of the genus *Therapon*.

Mr. Campbell states that they were taken from a dam a long way back from the river, quite unconnected with any watercourse, and which had been dry a few months back, and he asks very naturally how did they get there. Instances of a similar kind are not uncommon. I recollect many years ago when the Merool Creek was first occupied by Squatters, that fishes of considerable size were found in newly formed dams and in ponds which had been dry for years previously. These reservoirs were, however, all in old watercourses, which had been at a former period well supplied with fish, as the remains of Aboriginal ovens testified, and it was thought probable that the fish so suddenly appearing in these newly formed and filled reservoirs, might have been preserved alive in the moist sand of the bed of the Creek. This supposition might no doubt be correct as far as Merool Creek is concerned, but it certainly cannot account for the fish found in the Warialda Dam, for it is not near a watercourse, and moreover the fish found in it are not of a kind capable of living in moist sand.

I see no difficulty myself in the far more likely hypothesis that the Ova of the fish are conveyed from one place to another by adhering to the feathers of ducks or other aquatic birds. The

spawn of some fish float on the surface of the water, and the viscous matter in which the ova are enveloped would in that case inevitably cause some of them to adhere to the feathers of a bird swimming on the surface. I have observed too that after a heavy fall of rain following a dry season, wild ducks of all kinds will in one night entirely desert the rivers and lagoons to which they have been for months confined, and seek "fresh fields and pastures new" in the newly filled ponds, dams, and lakes of the back country. It is a matter of almost certainty then, that, if it be the spawning season of any species of fish whose spawn floats on the surface of the water, ducks or other waterfowl will carry the ova with them, and if the distance be not too great the transfer will take place without desiccation or destruction of vitality.

The three specimens sent me by Mr. Campbell are evidently young fish (about 4 inches long), and are I have no doubt of the same species as is found in the waters of the Gwydir, and of several others of the northern rivers of New South Wales, and of southern Queensland—*Therapon unicolor* Gunther, Catalogue of Fishes, Brit. Mus., Vol I., page 277.

The Rev. J. E. Tenison-Woods observed that the sudden appearance of fish in surface water derived from rain was a matter well worth the attention of naturalists. In the south eastern district of S. Australia there is a small fish named *lap-lap* by the natives, which does not appear to have been described. It abounds in the swamps of that extensive district, where there are no watercourses properly speaking, but where the swamps drain from one to another in very wet seasons as the country is a dead level and in no place more than 300 feet above the sea. In this district there are extensive tracts of desert, with here and there grassy patches and swamps of water to which the sheep are taken to depasture in the winter. In summer these swamps are dried and the sheep are withdrawn to the home stations often 20 to 40 miles away. He remembered in 1861 having crossed one of the desert places with a companion at the close of summer. They had ventured to make a short cut overland by the aid of some very heavy rains which had fallen during the same week. In crossing by an

abandoned hut where there was an extensive system of troughs by the side of a swamp, they found the troughs one-third full and literally swarming with *lap-lap* fish about an inch or an inch and a half in length. The troughs had not probably been used for two or three months previously, and they could hardly doubt that they had been filled by the rain for there were no traces of any sheep having been there recently or of any visitors at all. He supposed that the ova of this fish would bear desiccation without perishing and that they had remained in the troughs until hatched by the rain. He had often observed also that when the immense flats of the Mosquito Plains, and the Muddy Creek heaths were inundated in winter, that dray tracks or any little indentation of the surface would become a channel along which the water slowly ran. These were always stocked with *lap-lap*, though in this case of course the ova or fry may have come from the swamps. He had come to the conclusion that the ova of these fishes would bear desiccation without perishing, and that they were often blown about and carried considerable distances by the wind, in dust storms, &c.

On a new species of *DESMOPHYLLUM* (*D. quinarium*) and
a young stage of *CYCLOSERIS SINENSIS*.

By REV. J. E. TENISON-WOODS, F.L.S., F.G.S., Cor. Memb.
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Desmophyllum is a genus of Turbinolinæ, which is specially distinguished by the presence of an epitheca and the absence of a columella; the corallum is simple, generally fixed by a large base; the fosette is very deep, and the septa are very much exserted, and stretch out like huge wings; the last cycle is more developed than that which precedes, and are often united to their neighbours, of the higher orders, from which they slightly diverge as they approach the centre; the wall is bare, smooth below, and presents some little crests in the neighbourhood of the calice. The genus was originally established by Ehrenberg for a species